TCS HACKQUEST CTF

Challenge Name: Area 64
Flag Format: HQX{...}

The challenge presented an encoded string and hinted that it was **not a hash**, encouraging identification of the correct encoding method rather than attempting to crack it.

Objective : To correctly identify the encoding used in the given text and decode it to reveal the hidden message and flag.

Initial Observation

The provided string appeared as:

WW91J3JlIGluc2lkZSBBcmVhIDY0LiBIZXJlJ3MgeW91ciBrZXkgOiBIUVh7NzBjNWQ1MjVjYTliYTEzY2Y5MjQ4MGE0OWJmNGNjZjh9

At first glance, the string might resemble a hash. However, closer inspection revealed important characteristics that suggested otherwise.

Identifying Base64 Encoding

The following indicators confirmed that the text was **Base64-encoded**:

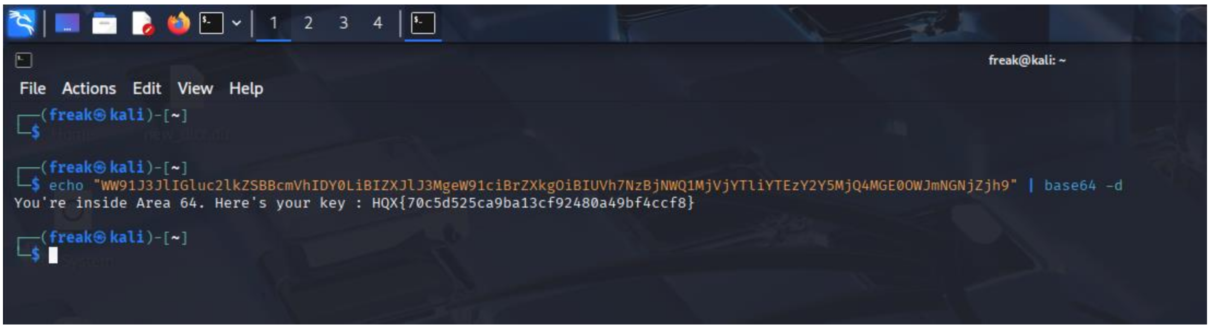
- Contains only valid Base64 characters:
  - Uppercase letters (A–Z)
  - Lowercase letters (a–z)
  - Numbers (0–9)
  - Special characters (+, /, =)
- No fixed-length hexadecimal pattern (unlike MD5/SHA hashes)
- Clean padding and structure typical of Base64
- Commonly used in beginner CTF challenges to hide readable text

These observations ruled out hashing and pointed clearly toward Base64 encoding.

Decoding the String

Method 1: Using Kali Linux

```
echo "WW91J3JlIGluc2lkZSBBcmVhIDY0LiBIZXJlJ3MgeW91ciBrZXkgOiBIUVh7NzBjNWQ1MjVjYTliYTEzY2Y5MjQ4MGE0OWJmNGNjZjh9" | base64 -d
```



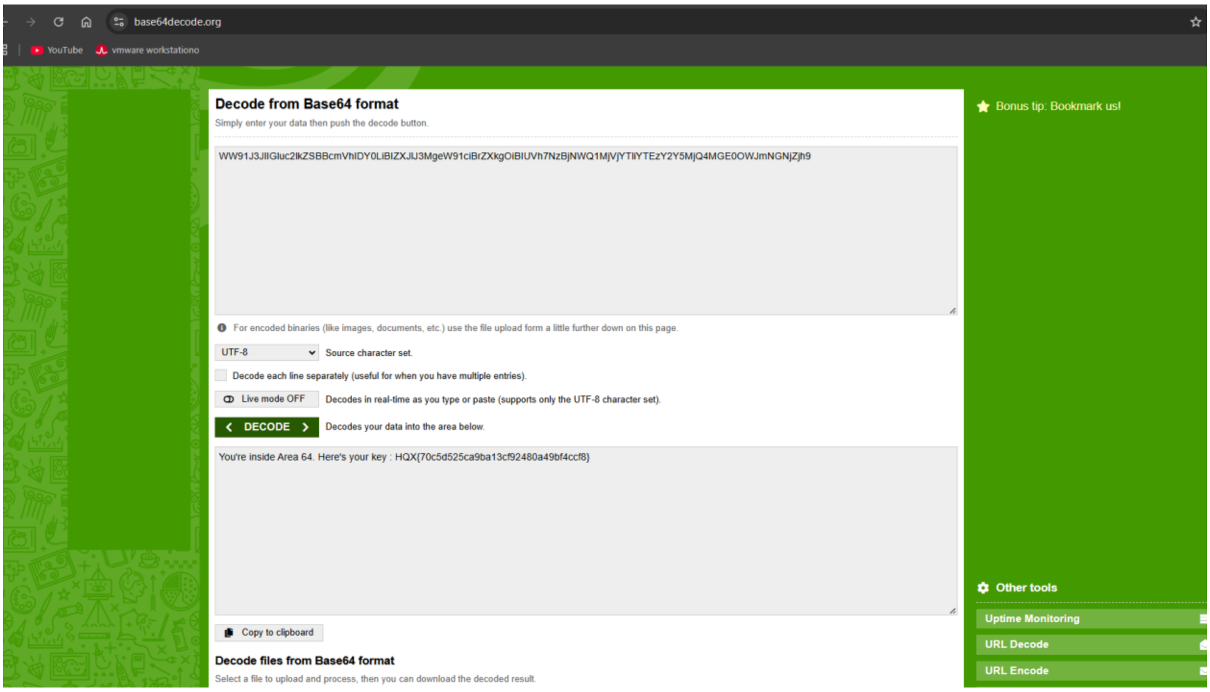
```
┌──(freak㉿kali)-[~]
└─$

┌──(freak㉿kali)-[~]
└─$ echo "WW91J3JlIGluc2lkZSBBcmVhIDY0LiBIZXJlJ3MgeW91ciBrZXkgOiBIUVh7NzBjNWQ1MjVjYTliYTEzY2Y5MjQ4MGE0OWJmNGNjZjh9" | base64 -d
You're inside Area 64. Here's your key : HQX{70c5d525ca9ba13cf92480a49bf4ccf8}

┌──(freak㉿kali)-[~]
└─$ █
```

Method 2: Using online cracking tools or websites

Like I used www.base64decode.org/



Decode from Base64 format

Simply enter your data then push the decode button.

```
WW91J3JlIGluc2lkZSBBcmVhIDY0LiBIZXJlJ3MgeW91ciBrZXkgOiBIUVh7NzBjNWQ1MjVjYTliYTEzY2Y5MjQ4MGE0OWJmNGNjZjh9
```

For encoded binaries (like images, documents, etc.) use the file upload form a little further down on this page.

UTF-8 Source character set.

□ Decode each line separately (useful for when you have multiple entries).

Live mode OFF Decodes in real-time as you type or paste (supports only the UTF-8 character set).

< DECODE > Decodes your data into the area below.

```
You're inside Area 64. Here's your key : HQX{70c5d525ca9ba13cf92480a49bf4ccf8}
```

Copy to clipboard

Decode files from Base64 format

Select a file to upload and process, then you can download the decoded result.

Flag Obtained

HQX{70c5d525ca9ba13cf92480a49bf4ccf8}